WHAT IS CLAIMED IS:

1.   A method of sending data from a first computer to a second computer connected within a network, the first computer having one or more data communication protocol layers that correspond to one or more data communication protocol layers in the second computer, the one or more protocol layers comprising at least a first protocol layer and a second protocol layer, the method comprising:

(a) attaching a first header to the data at the first protocol layer of the first computer;

(b) reserving a space in the first header for an identifier;

(c) sending the data and the first header from the first protocol layer to the second protocol layer of the first computer;

(d) repeating steps (a) – (b) for a second header;

(e) generating the identifier at the second protocol layer;

(f) storing the identifier in the reserved space of the first header and in the reserved space of the second header;

(g) sending the data with the first header and the second header from the second protocol layer of the first computer to its corresponding second protocol layer of the second computer over the network;

(h) removing the second header from the data at the second protocol layer of the second computer;

(i) copying the identifier from the reserved space in the second header to the reserved space in the first header;

(j) sending the data and the first header from the second protocol layer of the second computer to the first protocol layer of the second computer; and

(k) removing the first header from the data at the first protocol layer of the second computer.

2.   The method of claim 1, wherein storing the identifier in the reserved space of the first header and in the reserved space of the second header comprises copying and sending the identifier from the second protocol layer to the first protocol layer; and storing the identifier in the reserved space of the first header.

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3.   The method of claim 1, wherein the first protocol layer is the highest protocol layer.

4.   The method of claim 1, wherein the second protocol layer is the lowest protocol layer.

5.   The method of claim 1, wherein the first protocol layer and the second protocol layer is one of an application protocol layer and a network protocol layer.

6.   The method of claim 1, wherein the identifier is generated using a counter.

7.   The method of claim 1, further comprising sending a code from the second protocol layer of the first computer to the first protocol layer of the first computer, the code indicating whether the data was successfully sent from the second protocol layer of the first computer to its corresponding second protocol layer of the second computer.

8.   The method of claim 1, wherein the space reserved for the identifier is the first four bytes of each header.

9.   A method of sending data from a computer to a network through one or more data communication protocol layers, the protocol layers comprising a first protocol layer and a second protocol layer, the method comprising:
       (a) attaching a first header to the data at the first protocol layer;
       (b) reserving a space in the first header for an identifier;
       (c) sending the data and the first header from the first protocol layer to the second protocol layer;
       (d) repeating steps (a) – (b) for a second header;
       (e) generating the identifier at the second protocol layer;
       (f) storing the identifier in the reserved space of the first header and in the reserved space of the second header; and

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(g) sending the data with the first header and the second header from the second protocol layer to the network.

10.   The method of claim 9, wherein storing the identifier in the reserved space of the first header and in the reserved space of the second header comprises copying and sending the identifier from the second protocol layer to the first protocol layer; and storing the identifier in the reserved space of the first header.

11.   A method of receiving data by a computer from a network, the computer having one or more data communication protocol layers, the protocol layers comprising a first protocol layer and a second protocol layer, the method comprising:

(a) receiving from the network, at the second protocol layer, the data, a first header corresponding to the first protocol layer, and a second header corresponding to the second protocol layer;

(b) removing, at the second protocol layer, the second header from the data, the second header having an identifier;

(c) copying the identifier from the second header to the first header;

(d) sending the data and the first header from the second protocol layer to the first protocol layer; and

(e) removing the first header from the data at the first protocol layer.

12.   The method of claim 11, wherein the first protocol layer is the highest protocol layer.

13.   The method of claim 11, wherein the second protocol layer is the lowest protocol layer.

14.   The method of claim 11, wherein the second protocol layer is a network protocol layer.

15.   The method of claim 11, wherein the first protocol layer is an application protocol layer.

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16. A method of assigning an identifier to data processed through one or more protocol layers of one or more computers over a network, each protocol layer having a header, the method comprising:

      (a) reserving a space for the identifier in the header of each protocol layer;

      (b) generating the identifier at one of the protocol layers; and

      (c) storing the identifier in the reserved space.

17. The method of claim 16, wherein reserving a space for the identifier in the header of each protocol layer comprises reserving the first four bytes of the header.

18. The method of claim 16, wherein the one or more computers comprise a sending computer and a receiving computer; and wherein reserving a space for the identifier in the header of each protocol layer comprises reserving a space for the identifier in the header of each protocol layer of the sending computer.

19. The method of claim 18, wherein generating the identifier at one of the protocol layers comprises generating the identifier at the lowest protocol layer of the sending computer.

20. The method of claim 18, wherein storing the identifier in the reserved space of each header comprises:

      (a) copying the identifier from the lowest protocol layer in the sending computer to the rest of the protocol layers in the sending computer;

      (b) sending the identifier from the lowest protocol layer in the sending computer over the network to the lowest protocol layer in the receiving computer; and

      (c) copying the identifier from the lowest protocol layer in the receiving computer to the rest of the protocol layers in the receiving computer.

21. A computer program for sending data from a first computer to a second computer connected within a network embodied in a computer readable medium,

the first computer having one or more data communication protocol layers that correspond to one or more data communication protocol layers in the second computer, the one or more protocol layers comprising a first protocol layer and a second protocol layer, the computer program comprising:

(a) a code segment for attaching a first header to the data at the first protocol layer of the first computer;

(b) a code segment for reserving a space in the first header for an identifier;

(c) a code segment for sending the data and the first header from the first protocol layer to the second protocol layer of the first computer;

(d) a code segment for repeating steps (a) – (b) for a second header;

(e) a code segment for generating the identifier at the second protocol layer;

(f) a code segment for storing the identifier in the reserved space of the first header and in the reserved space of the second header;

(g) a code segment for sending the data with the first header and the second header from the second protocol layer of the first computer to its corresponding second protocol layer of the second computer over the network;

(h) a code segment for removing the second header from the data at the second protocol layer of the second computer;

(i) a code segment for copying the identifier from the reserved space in the second header to the reserved space in the first header;

(j) a code segment for sending the data and the first header from the second protocol layer of the second computer to the first protocol layer of the second computer; and

(k) a code segment for removing the first header from the data at the first protocol layer of the second computer.

22. A computer program for sending data from a computer to a network through one or more data communication protocol layers embodied in a computer program, the protocol layers comprising a first protocol layer and a second protocol layer, the computer program comprising:

(a) a code segment for attaching a first header to the data at the first protocol layer;

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(b) a code segment for reserving a space in the first header for an identifier;

(c) a code segment for sending the data and the first header from the first protocol layer to the second protocol layer;

(d) a code segment for repeating steps (a) – (b) for a second header;

(e) a code segment for generating the identifier at the second protocol layer;

(f) a code segment for storing the identifier in the reserved space of the first header and in the reserved space of the second header; and

(g) a code segment for sending the data with the first header and the second header from the second protocol layer to the network.

23.   A computer program for receiving data by a computer from a network embodied in a computer program, the computer having one or more data communication protocol layers, the protocol layers comprising a first protocol layer and a second protocol layer, the computer program comprising:

(a) a code segment for receiving from the network, at the second protocol layer, the data, a first header corresponding to the first protocol layer, and a second header corresponding to the second protocol layer;

(b) a code segment for removing, at the second protocol layer, the second header from the data, the second header having an identifier;

(c) a code segment for copying the identifier from the second header to the first header;

(d) a code segment for sending the data and the first header from the second protocol layer to the first protocol layer; and

(e) a code segment for removing the first header from the data at the first protocol layer.

24.   A computer program for assigning an identifier to data processed through one or more protocol layers of one or more computers over a network embodied in a computer program, each protocol layer having a header, the computer program comprising:

(a) a code segment for reserving a space for the identifier in the header of each protocol layer;

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(b) a code segment for generating the identifier at one of the protocol layers; and

(c) a code segment for storing the identifier in the reserved space.

25.   A computer-readable medium containing a data structure for storing an identifier, the data structure comprising a first header corresponding to a first protocol layer and a second header corresponding to a second protocol layer, each header comprising the identifier, wherein the header is copied to the first header and then from the first header to the second header prior to transmitting the data structure.